UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,005	04/08/2004	Soeng-Hun Kim	678-1428	9320

66547 7590 07/11/2007

THE FARRELL LAW FIRM, P.C.
333 EARLE OVINGTON BOULEVARD
SUITE 701
UNIONDALE, NY 11553

EXAMINER	
JACKSON, BLANE J	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
07/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,005	KIM ET AL.	
	Examiner	Art Unit	
	Blane J. Jackson	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-29* is/are allowed.

6)☒ Claim(s) *1,2,11,12,14,15 and 20* is/are rejected.

7)☒ Claim(s) *3, 4,6,13,14,16-19 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The Information Disclosure Statement filed 31 July 2006 is made of record.

Claim Objections

Claims 1 and 26 are objected to because of the following informalities:

As to claim 1, it is expected that "serving cell" of "and control information necessary for accessing an MBMS data transport channel of the serving cell" should be amended to "target cell" to be consistent with the subsequent claim language. Appropriate correction is required.

The language in the preamble of claim 26 is not complete and not clear but the intent is understood. Amendment to the claim language is suggested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 11, 12, ~~14~~, 15 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US 6,731,936).

As to claim 1, Chen teaches a cell reselection method by a user equipment (UE) receiving a Multimedia Broadcast/Multicast Service (MBMS) service in a serving cell of a mobile communication system including a plurality of cells and providing the MBMS service (figure 2, Abstract), the method comprising the steps of:

Receiving a control data of the serving cell, including configuration information necessary for accessing MBMS control channels (MCCHs) of neighbor cells and control information necessary for accessing an MBMS data transport channel of the serving cell over an MCCH of the serving cell and storing the received control data (figure 2, column 13, lines 26-63, the subscriber station determines the configuration of the second or next sector in accordance with a value of an HSBS neighbor configuration indicator which is included in the Broadcast Service Parameters Message transmitted by the base station serving the current sector; column 7, line 42 to column 8, line 43, the Broadcast Service Parameters Message provides the subscriber station with a list of identities of sectors that are part of the sector's SHO group for each supported F-BSCH (transport channel)), and

If cell reselection to a target cell, which is one of the neighbor cells is determined, moving to the target cell by utilizing the configuration information stored for the target cell (column 13, line 64 to column 14, line 5 and column 14, line 43 to 62, the subscriber station takes action in accordance with the values of the HSBS neighbor configuration

indicator when the subscriber station makes the decision to handoff to a second or neighbor sector).

As to claim 2 with respect to claim 1, Chen teaches the configuration information includes a primary scrambling code, a transport format, a spreading factor and a code number for each code channel to which the MCCHs of the neighbor cells are mapped (column 7, lines 42 to column 8, line 6, a spread spectrum system where the local existing overhead messages, a foreword paging channel or a forward broadcast control channel includes similar control channel signaling information of the neighbor sectors for handoff purposes).

As to claim 11 with respect to claim 1, Chen further comprising the steps of:

Measuring qualities of signals from the serving cell and the neighbor cells (column 8, lines 7-10, autonomous soft handoff),

Designating the neighbor cells satisfying a service criterion provided from the serving cell as candidate cells (column 8, lines 28-43),

Receiving control information necessary for accessing MTCHs of the candidate cells over MCCHs of the candidate cells using configuration information stored for the candidate cells (column 8, lines 18-26, control information provided in a Broadcast Service Parameters message transmitted in each sector),

Storing the received control information (column 8, lines 18-26, the neighbor list is stored and used to monitor the candidate cells),

Determining priorities of the serving cell and the candidate cells (column 8, line 28 to column 9, line 14, the subscriber station qualifies the sectors to an Active Set, Candidate Set, Neighbor Set and the Remaining Set),

If there is at least one candidate cell having a priority that is higher than the priority of the serving cell, selecting the at least one candidate cell having a highest priority as a target cell (column 8, lines 8-16, subscriber station assigns identifiers of sectors based on the signal strength to streamline the decision process for handoff),

Receiving an MBMS data stream over an MTCH of the target cell using control information stored for the target cell (column 13, lines 64 to column 14, line 5).

As to claim 12 with respect to claim 11, Chen teaches the signal qualities include a received signal code power and chip-energy-to-noise ration Ec/No for common pilot channels of the neighbor cells (column 8, lines 8-13,a quality metric including pilot signal strength or others known to one of ordinary skill in the art).

As to claim 15, Chen teaches a method for providing a Multimedia Broadcast/Multicast Service (MBMS) service to a user equipment moving between a plurality of cells in a mobile communication system providing the MBMS service, the method comprising the steps of:

Transmitting system information including information on a secondary common control channel for an MBMS service of a serving cell over a primary common control

channel of the serving cell (column 12, line 60 to column 13, line 45, subscriber station configured to monitor the forward broadcast channel),

Transmitting control data including configuration information necessary for accessing MBMS control channels (MCCHs) of neighbor cells and control information necessary for accessing an MBMS data transport channel IMTCH) of the serving cell over the secondary common control channel of the serving cell while providing the MBMS service over the MTCH of the serving cell (column 13, lines 46-66, the subscriber station determines the configuration of the second sector in accordance with a value of an HSBS neighbor configuration indicator transmitted by the current sector).

As to claim 20 with respect to claim 15, Chen teaches the control information includes a spreading factor and a code number of a code channel to which the MTCH of the serving cell is mapped (column 13, lines 1-63, a spread spectrum system including a Broadcast Service Parameters Message transmitted in the serving and neighbor sector which includes information of the forward broadcast shared channel).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,731,936) in view of Sinnarajah et al. (US 6,980,820).

As to claim 5 with respect to claim 1, Chen teaches a spread spectrum system where the control information or broadcast service parameters are signaled in existing overhead control channels including the identities of sectors that are part of the sector's SHO group for each supported foreword broadcast shared channel (F-BSCH), column 7, line 42 to column 8, line 43. Chen is silent as to the control information includes a spreading factor, a code number and a transport format set of a code channel to which the MTCH (transport channels) of the serving cell is mapped.

Sinnarajah, as referenced by Chen, also teaches a spread spectrum system where the broadcast service parameters are continuously transmitted by the local base station to the interested subscriber station in an overhead message specific to the broadcast service, column 6, line 55 to column 7, line 21. Sinnarajah discloses the logical to physical mapping information needs to be signaled over the air to the subscriber stations so a subscriber station desiring to monitor a give HSBS channel can determine which F-BSCH channel it should monitor, therefore the broadcast physical channel parameters, broadcast logical channel parameters and logical to physical mapping are signaled to the subscriber station over the air interface, column 5, line 45 to column 7, line 55.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize in the broadcast service parameter signaling of Chen the inclusion of the broadcast logical channel parameters as taught by Sinnarajah such that

the subscriber station is enabled to monitor the neighbor forward broadcast shared channel transmitted by base stations.

As to claims 7 and 9 with respect to claim 1, Chen teaches the step of receiving the control data is the serving cell but does not teach receiving system information including scheduling information of the control data and receiving the control data according to the scheduling information.

Sinnarajah teaches an HSBS schedule provided in the signaling overhead message by a spread spectrum communication system, column 7, line 56 to column 8, line 65.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize in the cell reselection method of Chen the scheduling information as described by Sinnarajah such that the subscriber station user knows the start, duration and/ or end time of a HSBS session.

As to claims 8 and 10 with respect to claims 7 and 9, Sinnarajah of Chen modified teaches the scheduling information includes a transmission period, a transmission time and a data length for one period for control data on a code channel to which the MCCH of the serving cell is mapped (column 8, lines 28-65, the signaling message includes information to the start, duration and/ or end of the session).

Allowable Subject Matter

Claims 3, 4, 6, 13, 14, 16-19 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 3, the prior art made of record teaches scheduling information for the multimedia transport channels but does not teach scheduling information for the MCCHs or control channels of the neighbor cells.

Claims 22-29 are allowed. As to claim 22, the prior art made of record teaches a cell reselection method by a user equipment receiving a Multimedia Broadcast/Multicast Service but does not teach receiving first system information of the candidate cells including scheduling information necessary for accessing MBMS control channels of the candidate cells.

As to claim 26, the prior art made of record teaches a cell reselection method by a user equipment receiving a Multimedia Broadcast/Multicast Service but does not teach transmitting in a cell providing the MBMS service, first system information including scheduling information necessary for accessing an MBMS control channel of the cell.

Conclusion

The prior art made of record and not relied upon but considered pertinent to applicant's disclosure includes Noneman (US 5,887,252), Ahmed et al. (US 6,256,300),

Paila et al. (US 6,977,914), Famolari (US 6,993,000), Basilier (US 7,061,880) and Reza et al. (Us 7,082,116).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blane J. Jackson whose telephone number is (571) 272-7890. The examiner can normally be reached on Monday through Thursday, 7:30 AM-6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.